

AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A data processing method for storing or transmitting a plurality of object data and scene description data, wherein: the plurality of object data respectively correspond to a plurality of objects which compose a scene; the plurality of object data includes object data as video data or audio data; and the scene description data describes how the plurality of objects compose the scene, said method comprising:

encrypting at least object data corresponding to specified objects which are predetermined among the plurality of objects based on control information corresponding to the object to be encrypted; and

outputting respective object data and the scene description data to a storage medium or a transmission medium.

2. (Previously Presented) A data processing method for storing or transmitting a plurality of object data and scene description data, wherein: the plurality of object data respectively correspond to a plurality of objects which compose a scene; the plurality of object data includes object data as video data or audio data; and the scene description data describes how the plurality of objects compose the scene, said method comprising:

encrypting at least object data corresponding to specified objects which are predetermined among the plurality of objects; and

outputting respective object data and the scene description data to a storage medium or a transmission medium, wherein

said outputting includes storing encryption identifiers, each indicating whether or not object data of a corresponding object included in the plurality of objects has been encrypted, in the scene description data and outputting the encryption identifiers to the storage medium or the transmission medium.

3. (Previously Presented) The data processing method of Claim 1, wherein

said outputting includes storing the control information, the control information being required for encryption, in the scene description data and outputting the control information to the storage medium or the transmission medium.

4. (Previously Presented) A data processing method for storing or transmitting a plurality of object data and scene description data, wherein: the plurality of object data respectively correspond to a plurality of objects which compose a scene; the plurality of object data includes object data as video data or audio data; and the scene description data describes how the plurality of objects compose the scene, said method comprising:

encrypting at least object data corresponding to specified objects which are predetermined among the plurality of objects; and

outputting respective object data and the scene description data to a storage medium or a transmission medium, wherein

said encrypting includes encrypting object data of the specified objects which is predetermined without encrypting the scene description data.

5. (Previously Presented) The data processing method of Claim 1, wherein
said encrypting includes using plural different control information for the respective
specified objects as the control information, the control information being required for encrypting
the respective object data when encrypting the object data of the specified objects.

6. (Previously Presented) The data processing method of Claim 1, wherein
said encrypting includes changing a type of the control information, the control
information being required for encryption, with elapse of time after encryption of the object data
starts.

7. (Previously Presented) A data processing method for storing or transmitting a
plurality of object data and scene description data, wherein: the plurality of object data
respectively correspond to a plurality of objects which compose a scene; the plurality of object
data includes object data as video data or audio data; and the scene description data describes
how the plurality of objects compose the scene, said method comprising:

compressing object data corresponding to each of the plurality of objects which compose
the scene and outputting compressed object data;

sequentially encrypting at least compressed object data corresponding to specified objects
which are predetermined among the plurality of objects, according to control information for
encryption of respective object data corresponding to the specified objects; and

outputting respective compressed object data and the scene description data to a storage medium or a transmission medium, wherein

said encrypting includes encrypting control information for a target object corresponding to object data to be encrypted according to control information for an encrypted object corresponding to previously encrypted object data, and adding encrypted control information to the previously encrypted object data.

8. (Previously Presented) A data processing method for storing or transmitting a plurality of object data and scene description data, wherein: the plurality of object data respectively correspond to a plurality of objects which compose a scene; the plurality of object data includes object data as video data or audio data; and the scene description data describes how the plurality of objects compose the scene, said method comprising:

compressing object data corresponding to each of the plurality of objects which compose the scene, and outputting compressed object data;

sequentially encrypting at least compressed object data corresponding to specified objects which are predetermined among the plurality of objects according to first control information for encryption; and

outputting respective compressed object data and the scene description data to a storage medium or a transmission medium, wherein

said encrypting includes encrypting the first control information according to second control information for encryption, dividing encrypted first control information into a plurality of

information parts respectively corresponding to the specified objects, and adding the plurality of information parts to the object data of the specified objects, respectively.

9. (Previously Presented) A data processing apparatus for storing or transmitting a plurality of object data and scene description data, wherein: the plurality of object data respectively correspond to a plurality of objects which compose a scene; the plurality of object data includes object data as video data or audio data; and the scene description data describes how the plurality of objects compose the scene, said apparatus comprising:

a plurality of data compressors respectively provided for the plurality of objects, operable to compress the plurality of object data, respectively, and output respective compressed object data;

a multiplexor operable to multiplex the scene description data and the respective compressed object data as individual streams and output a multiplexed bit stream; and

an encryptor operable to encrypt individual streams in the multiplexed bit stream which correspond to specified objects which are predetermined among the plurality of objects based on control information corresponding to the object to be encrypted, to produce an encrypted bit stream, wherein

the encrypted bit stream is output to a data storage medium or a data transmission medium.

10-11. (Canceled)

12. (Previously Presented) A data storage medium which contains a data processing program for making a computer perform data processing for a scene selection data and a plurality of object data, wherein: the plurality of object data respectively correspond to a plurality of objects which compose a scene; the plurality of object data includes object data as video data or audio data; and the scene description data describes how the plurality of objects compose the scene, said data processing program comprising:

an encryption section operable to instruct the computer to encrypt at least object data corresponding to specified objects which are predetermined among the plurality of objects based on control information corresponding to the object to be encrypted; and

a data output section operable to instruct the computer to output respective object data and the scene description data to a storage medium or a transmission medium.

13-15. (Canceled)

16. (Previously Presented) The data processing method of Claim 28, wherein when said deciding indicates that the compressed and encrypted object data is reproducible, the compressed and encrypted object data corresponding to all the specified objects can be read from the storage medium or can be received through the transmission medium.

17. (Previously Presented) The data processing method of Claim 28, wherein

when said deciding indicates that the compressed and encrypted object data is reproducible, the scene description data has been read from the storage medium or received through the transmission medium, and the compressed and encrypted object data corresponding to all the specified objects can be read from the storage medium or can be received through the transmission medium.

18. (Previously Presented) The data processing method of Claim 28, wherein when said deciding indicates that the compressed and encrypted object data is reproducible, the scene description data has been read from the storage medium or received through the transmission medium and all object data including the compressed and encrypted object data corresponding to the specified objects can be read from the storage medium or can be received through the transmission medium.

19. (Previously Presented) The data processing method of Claim 28, wherein when said deciding indicates that the compressed and encrypted object data is reproducible, the scene description data and object data corresponding to all objects which compose the scene have been read from the storage medium or received through the transmission medium.

20-24. (Canceled)

25. (Previously Presented) A data processing method for use with scene description data and a plurality of object data, wherein: the plurality of object data respectively correspond to a plurality of objects which compose a scene; the plurality of object data includes object data as video data or audio data; and the scene description data describes how the plurality of objects compose the scene, said method comprising:

reading an encrypted bit stream from a storage medium or receiving the encrypted bit stream through a transmission medium, and performing reproduction of the encrypted bit stream, wherein the encrypted bit stream is previously generated by encrypting, from among the scene description data and the plurality of object data, at least predetermined object data corresponding to specified objects, and the predetermined object data is predetermined among the plurality of object data;

deciding whether the scene description data has been encrypted as encrypted scene description data in the encrypted bit stream or is unencrypted scene description data, and deciding whether each of the plurality of object data have been encrypted as encrypted object data in the encryption bit stream or are unencrypted object data;

if the scene description data is decided to have been encrypted, decrypting the encrypted scene description data;

decrypting the encrypted object data to produce respective decrypted object data; and

displaying the scene based on the scene description data, the decrypted object data, and the unencrypted object data.

26. (Previously Presented) A data processing apparatus for use with scene description data and a plurality of object data, wherein: the plurality of object data respectively correspond to a plurality of objects which compose a scene; the plurality of object data includes object data as video data or audio data; and the scene description data describes how the plurality of objects compose the scene, and for use with an encrypted bit stream read from a storage medium or received through a transmission medium, wherein the encrypted bit stream is previously generated by encrypting, from among the scene description data and the plurality of object data, at least predetermined object data corresponding to specified objects, and the predetermined object data is predetermined among the plurality of object data, said apparatus comprising:

- a decryption device operable to decrypt encrypted scene description data and/or encrypted object data included in the encrypted bit stream according to a first control signal, to produce decrypted data;

- a display device operable to display the scene based on the decrypted data according to a second control signal; and

- a controller operable to:

- decide whether the scene description data has been encrypted as encrypted scene description data in the encrypted bit stream or is unencrypted scene description data, and decide whether each of the plurality of object data have been encrypted as encrypted object data in the encryption bit stream or are unencrypted object data;

control said decrypting device with said first control signal to decrypt: the encrypted scene description data if said controller decides that the scene description data has been encrypted; and the encrypted object data to produce respective decrypted object data; and

control said display device with said second control signal to display the scene based on the scene description data, the decrypted object data, and the unencrypted object data.

27. (Previously Presented) A data processing method for use with scene description data and a plurality of object data, wherein: the plurality of object data respectively correspond to a plurality of objects which compose a scene; the plurality of object data includes object data as video data or audio data; and the scene description data describes how the plurality of objects compose the scene, said method comprising:

reading an encrypted bit stream from a storage medium or receiving the encrypted bit stream through a transmission medium, and performing reproduction of the encrypted bit stream, wherein the encrypted bit stream is previously generated by encrypting, from among the scene description data and the plurality of object data, at least predetermined object data corresponding to specified objects, and the predetermined object data is predetermined among the plurality of object data;

deciding whether or not encrypted object data corresponding to the specified objects is reproducible; and

performing reproduction of all object data when said deciding indicates that the encrypted object data is reproducible, said reproduction including decryption of the encrypted object data corresponding to the specified objects and display of the object data.

28. (Previously Presented) A data processing method for use with scene description data and a plurality of object data, wherein: the plurality of object data respectively correspond to a plurality of objects which compose a scene; the plurality of object data includes object data as video data or audio data; and the scene description data describes how the plurality of objects compose the scene, said method comprising:

reading an encrypted bit stream from a storage medium or receiving the encrypted bit stream through a transmission medium, and performing reproduction of the encrypted bit stream, wherein the encrypted bit stream is previously generated by compressing the plurality of object data to produce a plurality of compressed object data, and encrypting, from among the scene description data and the plurality of compressed object data, at least predetermined compressed object data corresponding to specified objects, and the predetermined compressed object data is predetermined among the plurality of compressed object data;

deciding whether or not compressed and encrypted object data corresponding to the specified objects is reproducible; and

performing reproduction of all object data when said deciding indicates that the compressed and encrypted object data is reproducible, said reproduction including decryption of

the compressed and encrypted object data corresponding to the specified objects, and decompression and display of the object data.

29. (Previously Presented) A data processing method for use with scene description data and a plurality of object data, wherein: the plurality of object data respectively correspond to a plurality of objects which compose a scene; the plurality of object data includes object data as video data or audio data; and the scene description data describes how the plurality of objects compose the scene, said method comprising:

reading an encrypted bit stream from a storage medium or receiving the encrypted bit stream through a transmission medium, and performing reproduction of the encrypted bit stream, wherein the encrypted bit stream is previously generated by compressing the plurality of object data to produce a plurality of compressed object data, and encrypting, from among the scene description data and the plurality of compressed object data, at least predetermined compressed object data corresponding to specified objects, and the predetermined compressed object data is predetermined among the plurality of compressed object data;

judging whether the scene description data is encrypted or not encrypted, and judging whether each object data is encrypted or not encrypted;

decrypting the encrypted bit stream to produce compressed object data corresponding to the specified objects according to a result of said judging; and

decompressing the compressed object data corresponding to all objects which compose the scene, to produce restored object data, wherein said decompressing includes writing the

restored object data corresponding to all objects onto reference memories and reading from the reference memories in such a way that the restored object data is subjected to secondary encryption before it is written onto the reference memories and the restored object data is subjected to decryption for decrypting the secondary encryption after it is read from the reference memories.

30. (Currently Amended) A data processing method for use with scene description data and a plurality of object data, wherein: the plurality of object data respectively correspond to a plurality of objects which compose a scene; the plurality of object data includes object data as video data or audio data; and the scene description data describes how the plurality of objects compose the scene, said method comprising:

reading an encrypted bit stream from a storage medium or receiving the encrypted bit stream through a transmission medium, and performing reproduction of the encrypted bit stream, wherein the encrypted bit stream is previously generated by compressing the plurality of object data to produce a plurality of compressed object data, and encrypting, from among the scene description data and the plurality of compressed object data, at least predetermined compressed object data corresponding to specified objects, and the predetermined compressed object data is predetermined among the plurality of compressed object data;

judging whether the scene description data is encrypted or not encrypted, and judging whether each object data is encrypted or not ~~encrypted~~ encrypted;

decrypting the encrypted bit stream to produce compressed object data corresponding to the specified objects according to a result of said judging; and

decompressing the compressed object data corresponding to all objects which compose the scene, to produce restored object data, wherein said decompressing includes writing the restored object data of the respective objects onto corresponding reference memories and reading from the reference memories in such a way that each of the restored object data is written onto a corresponding reference memory after it is subjected to secondary encryption and each of the restored object data is read from the corresponding reference memory and then subjected to decryption for decrypting the secondary encryption.

31. (Previously Presented) A data processing apparatus which reads an encrypted bit stream from a storage medium or receives the encrypted bit stream through a transmission medium and performs reproduction of the encrypted bit stream, said data processing apparatus being for use with scene description data and a plurality of object data,

wherein: the plurality of object data respectively correspond to a plurality of objects which compose a scene; the plurality of object data includes object data as video data or audio data; the scene description data describes how the plurality of objects compose the scene; the encrypted bit stream is obtained by compressing the plurality of object data to produce a plurality of compressed object data, and encrypting, from among the scene description data and the plurality of compressed object data, at least predetermined compressed object data corresponding

to specified objects; and the predetermined compressed object data is predetermined among the plurality of compressed object data;

said data processing apparatus comprising:

a judging unit operable to judge whether the scene description data is encrypted or not encrypted, and operable to judge whether each object data is encrypted or not encrypted;

a decryption unit operable to decrypt the encrypted bit stream to produce decrypted data according to a result of said judging unit;

a plurality of data decompressors respectively provided for the plurality of objects, operable to decompress corresponding compressed object data included in the decrypted data, to produce decompressed object data; and

a plurality of memories respectively provided for the plurality of objects, operable to store corresponding decompressed object data, wherein

each of said plurality of data decompressors includes an encryption unit operable to subject the decompressed object data to secondary encryption before it is output to a corresponding memory, and a decryption unit operable to decrypt the secondary encryption of the decompressed object data after it is read from the corresponding memory.

32. (Previously Presented) A data processing method for use with scene description data and a plurality of object data, wherein: the plurality of object data respectively correspond to a plurality of objects which compose a scene; the plurality of object data includes object data as

video data or audio data; and the scene description data describes how the plurality of objects compose the scene, said method comprising:

reading an encrypted bit stream from a storage medium or receiving the encrypted bit stream through a transmission medium, and performing reproduction of the encrypted bit stream including display of an image, wherein the encrypted bit stream is previously generated by encrypting, from among the scene description data and the plurality of object data, at least predetermined object data corresponding to specified objects, and the predetermined object data is predetermined among the plurality of object data;

extracting the scene description data from the encrypted bit stream; and

limiting the display of the image such that an image based on the object data corresponding to each of the specified objects is prevented from being displayed individually, according to the scene description data.

33. (Previously Presented) A data processing method for use with scene description data and a plurality of object data, wherein: the plurality of object data respectively correspond to a plurality of objects which compose a scene; the plurality of object data includes object data as video data or audio data; and the scene description data describes how the plurality of objects compose the scene, said method comprising:

reading an encrypted bit stream from a storage medium or receiving the encrypted bit stream through a transmission medium, and performing reproduction of the encrypted bit stream including display of an image, wherein the encrypted bit stream is previously generated by

encrypting, from among the scene description data and the plurality of object data, at least predetermined object data corresponding to specified objects, and the predetermined object data is predetermined among the plurality of object data;

deciding whether or not encrypted object data corresponding to all the specified objects has been decrypted; and

displaying the image based on the object data corresponding to the specified objects when deciding that the encrypted object data corresponding to all the specified objects has been decrypted.